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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,302	12/15/2003	N. Ranjith Kumar	P16882	5466

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EXAMINER	
ABELSON, RONALD B	
ART UNIT	**PAPER NUMBER**
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/736,302	KUMAR ET AL.	
	Examiner	Art Unit	
	Ronald Abelson	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 6, 7, and 10-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Munger (US 6,834,310).

Regarding claims 1, 13, Munger teaches identifying a first header portion and a second header portion of a packet header for an information packet (source IP address, destination IP address, col. 22 lines 1-19).

Munger teaches storing the first header portion and the second header portion (As packets are received, col. 22 lines 12-14).

Munger teaches checking if the first header portion has a first pre-determined relationship to a first stored pattern associated with the first header portion; and

checking if the second header portion has a second pre-

determined relationship to a second stored pattern associated with the second header portion (receive table lists valid source IP address, destination address, window W3 slides down list of valid entries, col. 22 lines 1-19).

Regarding claims 2, 11, 14, a plurality of pre-determined relationships and stored patterns are associated with the first header portion (window that represents list of valid IP source, col. 22 lines 8-12).

Regarding claim 6, generating an indication that the information packet has an invalid packet header if either the first header portion check or the second header portion check fails (those falling outside of window will be rejected, col. 22 lines 14-17).

Regarding claim 7, the packet header is associated with at least one of: (i) an Internet protocol network, (ii) an asynchronous transfer mode network, and (iii) a frame relay network (IP, col. 22 lines 1-19).

Regarding claim 10, a memory unit stores an indication of the first pre-determined relationship along with the first

stored pattern for the first header portion (table, maintains list of valid IP source, IP destination, col. 22 lines 1-19).

Regarding claim 12, the memory unit further stores an indication of the number of pre-determined relationships and stored patterns that are associated with the first header portion (fig. 12A box 1222: see number of rows in table 1222).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munger as applied to claims 2 and 14 above, and further in view of Kunze (US 20030058860).

Munger is silent on the pre-determined relationships associated with the first header portion indicate that the first

header portion should not equal any of the stored patterns associated with the first header portion.

Kunze teaches the pre-determined relationships associated with the first header portion indicate that the first header portion should not equal any of the stored patterns associated with the first header portion (destination address checked against known non-forwarding addresses, [0006]).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Munger by having a list on non-forwarding addresses, as shown by Kunze. This modification can be performed in software. This modification would benefit the system by removing non forwarding packets.

5. Claims 18-20 and 23-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Munger in view of Heatzig (US 4,878,002).

Regarding claims 18 and 23, Munger teaches storing a first header portion and a second header portion of a packet header for an information packet (source IP address, destination IP address, col. 22 lines 1-19), and storing a first pre-determined relationship and associated first stored pattern for the first

header portion and a second pre-determined relationship and associated second stored pattern for the second header portion (receive table lists valid source IP address, destination address, window W3 slides down list of valid entries, col. 22 lines 1-19).

Munger is silent on a backplane; a first line card connected to the backplane; and a second line card connected to the backplane, the second line card having a network processor that includes a first memory unit and a second memory unit.

Heatzig teaches a backplane (fig. 2: Backplane B); a first line card connected to the backplane (fig. 2: card S1); and a second line card connected to the backplane (fig. 2: card S2), the second line card having a network processor (fig. 2 card S2 Servo/Loop Controller DSP) that includes a first memory unit (fig. 2 card S2 Dual Port Global Memory) and a second memory unit (fig. 2 card S2 Local Memory).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Munger by storing the first and second header portions of the packet on the first memory unit of Heatzig and storing the predetermined relationships of the first and second header portions of the second memory unit of Heatzig. This modification would benefit

the system by providing a cheap, reliable method for storing and transporting the information.

Regarding claim 19, 24, the first and second memory units comprise a single device (Heatzig: fig. 2 box S2).

Regarding claims 20, 25, a plurality of pre-determined relationships are associated with the first header portion (Munger: window that represents list of valid IP source, col. 22 lines 8-12).

6. Claims 4, 5, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of over Munger and Kunze as applied to claims 3 and 15 above, and further in view of Pandya (US 6,792,502).

Regarding claim 4 and 16, the combination is silent on the stored patterns associated with the first header portion are stored in a content addressable memory unit 'CAM'.

Pandya teaches storage using a CAM (fig. 1, col. 4 lines 30-34).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by storing the patterns using a CAM, as suggested by Pandya. This

modification can be performed according to the teachings of Pandya. This modification would benefit the system since a CAM is a proven, reliable method for storage.

Regarding claim 5, 17, the first header portion check is performed simultaneously for all of the stored header patterns that are associated with the first header portion by providing the first header portion to the content addressable memory unit. Note, Pandya teaches simultaneous checking / processing (simultaneous process, col. 4 lines 30-34).

7. Claims 8, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munger as applied to claim 1 above, and further in view of Noehring (US 7,194,766).

Munger is silent on an action identifier is stored along with the first header portion and the second header portion, as specified in claim 8 and wherein the action identifier indicates whether the associated packet should be processed or dropped, as specified in claim 9.

Noehring teaches an action identifier (status field, col. 12 lines 18-20), as specified in claim 8 and wherein the action identifier indicates whether the associated packet should be

processed or dropped (status field, packet dropped when status field indicates error, col. 12 lines 18-20), as specified in claim 9.

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Munger by storing an action identifier along with the first and second header portions, as suggested by Noehring. This modification can be performed according to the teachings of Noehring. This modification would benefit the system by providing an indication of whether the packet should be dropped.

8. Claims 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Munger and Heatzig as applied to claims 20 and 25 above, and further in view of Kunze (US 20030058860).

The combination is silent on the pre-determined relationships associated with the first header portion indicate that the first header portion should not equal any of the stored patterns associated with the first header portion.

Kunze teaches the pre-determined relationships associated with the first header portion indicate that the first header portion should not equal any of the stored patterns associated

with the first header portion (destination address checked against known non-forwarding addresses, [0006]).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by having a list on non-forwarding addresses, as shown by Kunze. This modification can be performed in software. This modification would benefit the system by removing non forwarding packets.

9. Claims 22 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Munger, Heatzig, and Kunze as applied to claims 21 and 26 above, and further in view of Pandya.

The combination is silent on the stored patterns associated with the first header portion are stored in a content addressable memory unit 'CAM'.

Pandya teaches storage using a CAM (fig. 1, col. 4 lines 30-34).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by storing the patterns using a CAM, as suggested by Pandya. This modification can be performed according to the teachings of Pandya. This modification would benefit the system since a CAM

is a proven, reliable method for storage.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (571) 272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ronald Abelson
Examiner
Art Unit 2616

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